COAL · OIL · PIPELINES · MINERALS · OIL SANDS · ELECTRICITY · NATURAL GAS · PETROCHEMICALS

ALBERTA'S ENERGY INDUSTRY.

AN OVERVIEW

Alberta Government

STATISTICAL INFORMATION PROVIDED BY THE ALBERTA ENERGY RESOURCES CONSERVATION BOARD AS OF JUNE 2012

Oil Sands and Conventional Oil

- In 2011, Alberta produced 490,000 barrels per day (bbl/d) of conventional light, medium and heavy crude, plus an additional 119,000 bbl/d of pentanes and condensate used for blending with heavy crude oil and bitumen to facilitate its transportation through pipelines.
- Conventional remaining established oil reserves are estimated to be approximately 1.5 billion barrels.
- Conventional crude oil production (not including oil sands, and pentanes and condensates) represented 22% of Alberta's total crude and equivalent production and 16% of Canada's total crude and equivalent production.
- Alberta's oil sands offer an attractive, responsible and sustainable energy development opportunity.
- Alberta's oil sands reserve is considered to be one of the largest in the world, containing 1.8 trillion barrels of bitumen initially in-place. Of this total, 168.7 billion barrels are considered to be remaining established reserves, recoverable using current technology and under present anticipated economic conditions. To date, about 4.4% of the initial established resource has been produced.
- In 2011, total crude bitumen production in Alberta averaged about 1,744,600 bbl/d.
- Of the total crude bitumen production in 2011, 1,617,600 bbl/d was marketable oil sands production, consisting of marketable bitumen and upgraded synthetic crude oil. This represented 73% of Alberta's total crude oil and equivalent production.
- According to Statistics Canada, estimated industry investment in Alberta's oil sands was $21.6 billion in 2011.
- Disposition of Alberta's total crude oil and equivalent production in 2011 was approximately:
  - 60% to the United States
  - 22% within Alberta
  - 16% to the rest of Canada
  - 2% offshore

Crude Oil Reserves (2011)	Oil Sands*	Conventional
	(Billion Barrels)	
Initial Volume In-Place	1,844	72.0
Initial Established	177	18.0
Cumulative Production	8.1	16.5
Remaining Established	169	1.5
Initial Ultimate Potential (recoverable)	315	19.7

Source: Energy Resources Conservation Board
* Oil sands consist of a mixture of sand, clay, water and bitumen, which, in its natural state, is not commercially recoverable through a well.

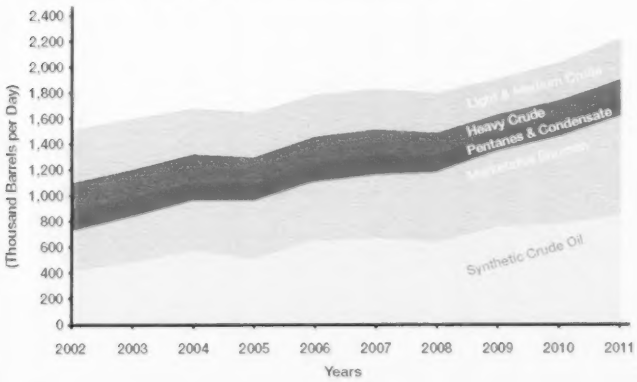
Deliveries of Crude Oil (2011)

(Thousands of barrels per day)

Alberta	Rest of Canada	U.S. Exports	Offshore Total	Total Disposition
485	368	1,347	44	2,244

Source: Energy Resources Conservation Board

Total Crude Oil and Equivalent Production

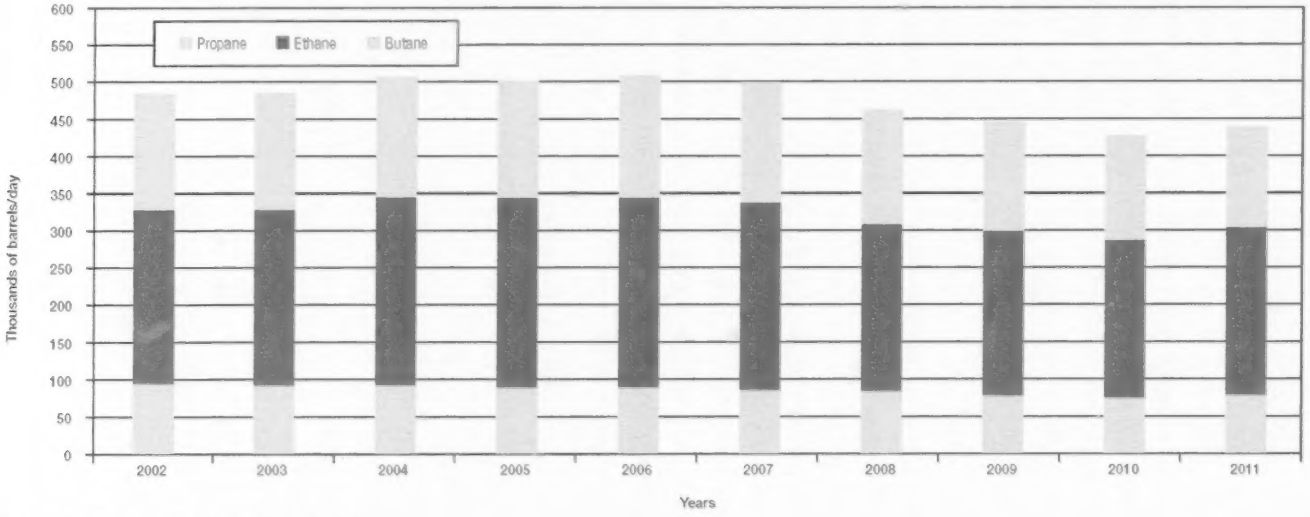


Source: Energy Resources Conservation Board

Petrochemicals

- Alberta is Canada's leading producer of petrochemicals.
- In 2011, Alberta's petrochemical and chemical industry produced products valued at over $13.5 billion.
- Alberta's petrochemical industry primarily produces ethylene, polyethylene, ethylene glycol, linear alpha olefins and acetic acid destined for markets in Asia and North America.
- Located primarily in Joffre and Fort Saskatchewan, petrochemical production is one of the largest manufacturing industries in the province.
- The petrochemicals sector is a critical market for Alberta's raw energy resources. Petrochemicals are produced by processing natural resources into higher-valued intermediate and finished products before exporting them.
- The Joffre and Fort Saskatchewan petrochemical area features four ethane-cracking plants, including two of the world's largest, with combined annual capacity to produce 8.6 billion pounds of ethylene.
- Alberta exported about $7.2 billion worth of petrochemicals and chemicals in 2011.
- The Government of Alberta amended the Incremental Ethane Extraction Program (IEEP) to encourage greater production of ethane from natural gas and off-gases produced as a by-product of bitumen upgrading and refining.
- To date, projects resulting in approximately 32,000 additional barrels of ethane have been approved.

Production of Natural Gas Liquids



Source: Energy Resources Conservation Board

Coal

- In 2011, marketable deliveries of coal in Alberta were 30.1 million tonnes (Mt). Sub-bituminous coal accounted for 23 Mt, Bituminous Metallurgical for 2.7 Mt, and Bituminous Thermal for 4.4 Mt.
- The Energy Resources Conservation Board estimates the remaining established reserves of all types of coal in Alberta as of December 31, 2011, to be 33.3 gigatonnes (Gt). Of this amount, 22.7 Gt (or about 68%) is considered recoverable by underground mining methods and 10.5 Gt is recoverable by surface mining methods.
- Of the total remaining established reserves, less than 1% is within permit boundaries of mines active in 2011.
- An upswing in global demand for metallurgical coal (coking) coal created an increase in coal leases. (1187 coal leases and 369 coal lease applications) covering a total of 1,102,985 hectares.

Natural Gas

- Alberta has a large natural gas resource base, with remaining estimated established reserves of 36 trillion cubic feet (Tcf).
- In 2011, Alberta produced 3.9 Tcf of marketable natural gas, including production of approximately 3.6 Tcf from conventional sources and 0.3 Tcf from unconventional sources (coalbed methane and shale).
- Alberta's non-conventional natural gas resources include coalbed methane, tight gas (natural gas trapped in low-permeability sedimentary rocks such as sandstone or limestone) and shale gas (trapped in shale rock).
- Alberta's coalbed methane resource is estimated to contain up to 500 Tcf of natural gas. A large-scale resource assessment of shale gas potential in Alberta by the Energy Resources Conservation Board is underway.
- Disposition of Alberta's natural gas production in 2011 was approximately:
  - 42% to the United States
  - 31% within Alberta
  - 27% to rest of Canada

Deliveries of Marketable Natural Gas

(Billion cubic feet per year)

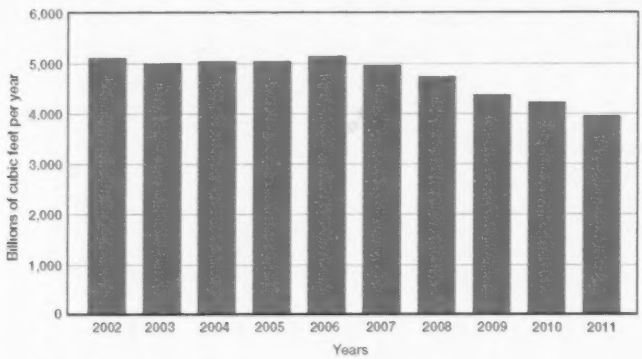
Alberta	Rest of Canada	U.S. Exports	Total Disposition
1,206	1,048	1,603	3,857

Source: Energy Resources Conservation Board (ST-3 Report)

Natural Gas Reserves (2011)	Trillions of Cubic Feet
Initial Volume In-Place	337
Initial Established	191
Cumulative Production	155
Remaining Established	36
Ultimate Potential (recoverable)	223

Source: Energy Resources Conservation Board

Marketable Natural Gas Production



Source: Energy Resources Conservation Board

Minerals

- As of December 31, 2011, there were 1,088 metallic and industrial mineral permits in good standing, 305 metallic and industrial mineral leases both encompassing at total of 7,540,591 million hectares of land.
- Alberta has the geological potential for uranium, potash and zinc whch has extended exploration interest in the province.

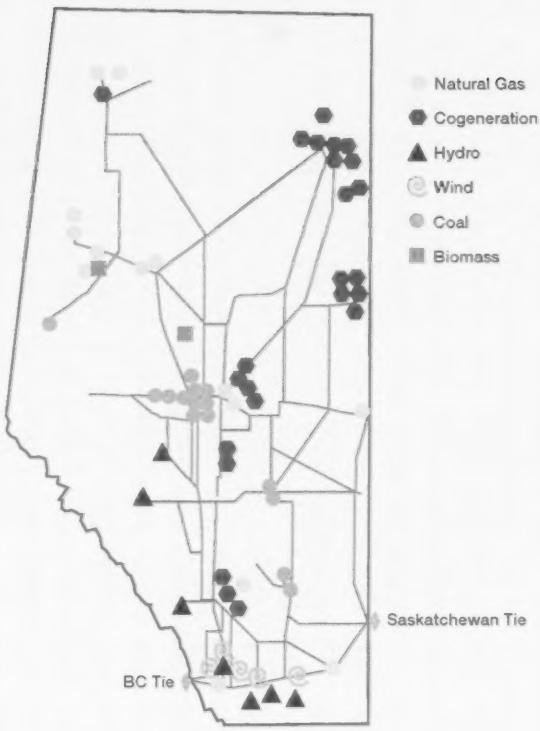
Electricity

- Alberta's competitive energy market has encouraged development of new generation. The marketplace is now better able to respond to growing demand by allowing any participant the opportunity to build new generation capacity.
- Investor confidence in Alberta's competitive electricity market has resulted in over 6,800 megawatts (MW) of new electricity generating capacity since 1998.
- In 2011, there was a net addition of 600 MW increased generation capacity to 13,671 MW of which, 16% was produced from renewable sources.
- In 2011, the average annual demand was 8,402 MW, an increase of 214 MW over 2010. The peak demand in 2011 was 10,226 MW which was 30 MW higher than in 2010. The peak demand for electricity in Alberta typically occurs in winter and variation in weather patterns is a significant factor behind the change in the peak demand.
- Across all fuel types, in 2011 there was 4,016 MW of cogeneration (29% of the total generation capacity) compared to 882 MW in 1998 (10% of the total generation capacity). Cogeneration makes more efficient use of the input fuel by creating both electricity and steam/heat for industrial process.

Electricity Generation Sources	2010	2011
	Generating Capacity (MW)*	
Coal	5,735	6,192
Natural Gas	5,217	5,251
Renewables (hydro, wind, biomass)	2,045	2,154
Waste Heat	62	62
Fuel Oil	12	12
Total	13,071	13,671

* Compiled by Alberta Energy based on the Energy Resources Conservation Board, Alberta Electric System Operator and industry information.

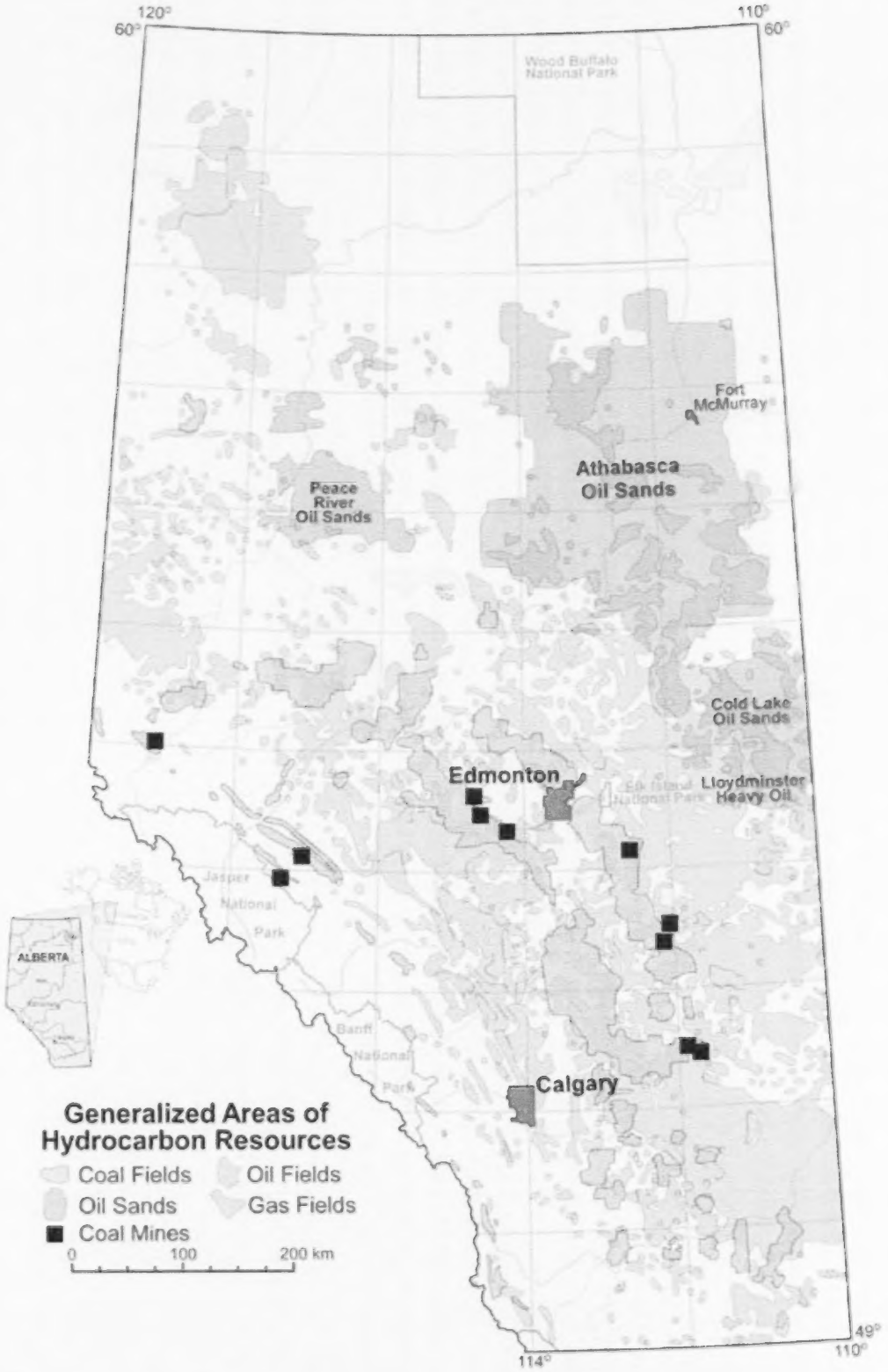
Alberta's Electric System:
Generation and Transmission



Energy Sector Highlights

- In 2011, According to Canadian Association of Petroleum Producers, 9,651 oil and gas wells were drilled in Alberta (70% of all Canadian oil and gas wells completed).
- In 2011, an estimated $19.8 billion was invested in Alberta's conventional oil and gas sector, and an estimated $21.6 billion was invested in oil sands. From 2001 to 2011 the combined oil, gas and oil sands capital expenditures in Alberta were an estimated $327 billion. Investment in Alberta oil sands has increased from $1.4 billion in 1998 to an estimated $21.6 billion in 2011.
- The Alberta "hub" includes 392,608 kilometres of pipeline that deliver oil and gas to markets in Canada and the U.S.
- Current upgrading capacity in Alberta is approximately 1.3 million bbl/d of bitumen. In 2011, synthetic crude oil production reached about 863,000 bbl/d.
- Approximately 57% of oil sands production is currently upgraded to synthetic crude oil within Alberta.
- According to the Energy Resources Conservation Board (ERCB) (Alberta's Reserves and Supply/Demand Outlook 2012-2021), total crude bitumen production will reach over 3.7 million bbl/d by 2021.
- In the 2011/2012 fiscal year, Alberta's net non-renewable resource revenues totalled $11.636 billion.

Hydrocarbon Resources



Source: Energy Resources Conservation Board and Alberta Geological Survey

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